2: Stefansson--59 (1908-1912) 1914 Copper Eskimo
116, 223, 237

"All groups shoot a few ptarmigans with bows; the only ones to whom birds and eggs are of much significance are those who summer in Victoria Island, some of these are said to kill numbers of swans and smaller water birds during the moulting season. The skins of all birds are used for hand wipers after eating greasy food, and the skins of loons are used for slippers between the socks and outer boots in winter. Loon skins are also used during the fly season in summer to beat off mosquitoes."

2: Stefansson--89 (1908-12) 1914 Copper Eskimo
116, 411, 237

"The backing of the bows is preferably of the leg sinew of old bull caribou; the leg sinew of smaller animals is also used, and even back sinew. There are three or more different ways of preparing this backing and applying to to the bow. The bowstring is of sinew braided three-ply into a long slender line. This length between tips of the strung bow is from four and a half to five and a half feet in those used by men; those for women and boys are smaller in all dimensions with less sinew backing and more slender bowstrings."

12: Collinson--284 [2] (1851-53) 1889 Copper Eskimo
116, 372, 237

"Wood is seldom if ever used as an article of fuel; seals' blubber being almost all that can be required in snow huts, where, if the temperature rise above freezing point, dissolution of house, bed, table, chairs, and floor ensues. In fact, the frost appears to do for them what fire does for us, render them dry and comfortable, and nothing can so seriously incommode them as a warm rainy day."

[P. 1]

MATERIAL CULTURE OF THE COPPER ESKIMO

INTRODUCTION

In 1914, when the Canadian Arctic Expedition established its headquarters at Bernard Harbour in Dolphin and Union Strait, on the western fringe of Copper Eskimo territory, the natives preserved their old culture, virtually unimpaired, despite contact with several explorers in the middle of the nineteenth century, and with others during the early years of the twentieth. The only visible change caused by these contacts was the introduction of a considerable quantity of iron, which the Eskimo hammered cold, as they hammered their native copper, and had already substituted for copper in knives, adzes, harpoon-heads, and needles. From lack of ammunition the only men who possessed rifles, five in number, had fallen back on the bow and arrow, which was still the universal weapon of the chase. Of the arrows not tipped with bone about two-thirds bore tips of hammered copper and only one-third tips of iron; the ice chisel and other tools retained their copper blades and points; and the soapstone pot for cooking meat held undisputed sway in every household. All clothing was of skin or fur, mainly from the caribou and the seal; and in cut and adornment it followed without change the styles set by earlier generations. The blubber of the seal, burned in a soapstone lamp, provided the only artificial light, and throughout the winter months all the energies of the Eskimo were concentrated on the pursuit of seals at their breathing holes in the sea ice.

Ten years later the situation had undergone a profound change. Native copper had become practically valueless and served for rivets only. Bows and arrows had disappeared, because every native was now armed with a high-powered rifle. Other weapons and tools had steel or iron blades, metal cooking pots had ousted the soapstone vessels, and primus lamps and kerosene lanterns were spreading from home to home. Fur clothing was tending to follow western Eskimo patterns, and to be overlaid with bead-work, or with imported garments of cotton or wool. Dissatisfied with the old-fashioned snow-hut and skin-covered kayak, one native had even erected a plank cabin heated by an iron stove, and purchased a motor-boat to transport his household goods along the coast during the brief summer months. The tentacles of the fur trade had firmly gripped the region, and the trapping of foxes, animals of no economic importance in earlier times, now rivalled in importance the hunting of seals and caribou.

Fortunately, before this revolution occurred, the Canadian Arctic Expedition had brought out a large collection of Copper Eskimo specimens, nearly all of which are now stored in the National Museum at Ottawa. These specimens, and

28: Jenness E-5 (1914-1916) 1946
NDG Copper Eskimo NDG

CHAPTER I

MATERIAL RESOURCES

Few people have been called upon to sustain life and perpetuate their race on such meagre resources as the Copper Eskimo. Even if they had been acquainted with agriculture the climate debarred it, just as it debarred the growth of trees except in two or three sheltered valleys along the southern fringe of their territory. It restricted not only the flora but the fauna, leaving the natives dependent for their food and for much of their equipment on one land animal, the seasonally migrating caribou, and two sea mammals, the foetid and the bearded seals, supplemented by such fish as they could capture in rivers, lakes, and bays. Ignorant of all metals except their native copper, which seemed to them only a malleable stone, and cut off from contact with any but neighbouring tribes, little or no more advanced than themselves, they had to build up their lives on the scanty resources provided by their own narrow environment, and rely on their own ingenuity to supply all their needs.

The resources provided by their environment fall naturally into four groups:

Wood
Stone (including native copper and other minerals)
Bone, antler, horn, ivory
Hides and sinew.

WOOD

The Copper Eskimo obtained their wood from two sources. First, there was the driftwood, mainly spruce and cottonwood, carried to the ocean by Mackenzie River far to the westward and borne by the winds and currents to Dolphin and Union Strait and western bays of Victoria Island. Then in the valleys of three rivers that flowed into Coronation Gulf, Coppermine, Napaktauktauk, and Tree, there stood scattered groves of spruce, small and stunted, a few miles from the coast, but larger as one proceeded south. Far to the southeast, too, near Thelon River, were other stands of spruce that the Eskimo from Bathurst Inlet and from the eastern shores of Victoria Island occasionally visited in their wanderings. Thus the Copper Eskimo had abundant wood to satisfy all their needs; but as driftwood was very scarce in many districts, and the standing timber on the southern fringe of their territory could be reached only after a long journey overland, which many natives were disinclined to make, manufactured objects of wood were among the commonest articles of trade and passed freely from one end of the territory to the other. Moreover, so crude were the Eskimo tools, and so great the labour of cutting down the trees and hewing the timber into shape, that any object of moderate size, such as a sled-runner, a table, or even a tent-pole, commanded a high price.[1]

The principal tools used in working wood were the adze and the whittling knife (*See* pp. 100 and 103). Bone or antler wedges, generally made for each occasion and immediately discarded, served to split small logs and planks; they were driven home with boulders. Lacking saws, the Eskimo shortened a plank in one or other of three ways: they hacked it with the adze; gouged it across with the grooving tool (*See* p. 100); or they drilled a line of holes across it with the bow drill.

[1] Cf. Stefansson, V.: The Stefansson-Anderson Arctic Expedition: Anth. Papers, Amer. Mus. of Nat. Hist., vol. XIV, pt. I, pp. 31, 32 *et al.*, New York, 1914.

412 Two incidents that came directly under my notice in the summer of 1915
322 were fairly typical. A native with whom I was travelling in southwest Victoria Island discovered on the beach a long, nail-studded plank that had presumably fallen overboard from some vessel. He carried it several miles inland to our camp, and there spent half a day splitting it into poles for fish-spear handles, two of which he sold to a kinsman. A few days later another native found a second plank, which he proposed to convert into a sled-runner, and with this purpose in view trimmed it slightly with his hunting knife. After consulting his companions, however, he decided that a new sled-runner was not needed, so he turned the [239] plank over to his stepfather to fashion into tent-poles. In each case the native split the plank with a crude antler wedge driven home by a boulder.

322 The uses of wood were naturally manifold. From it were made the sled,
[372] the tent-poles, the frame of the kayak, the snow shovel, the table, food trays, and other articles too numerous to mention. Odd chips of wood sometimes
824 served as fuel during the summer months, although the Eskimo preferred
513 heather or willow twigs. Willow twigs had a special use; sewn together in a long strip they provided a mattress to protect the bedskins from the snow.

STONE

333 Stone (apart from native copper) played an astonishingly small rôle in the economy of the Copper Eskimo. Their winter home was invariably the snow-
[342] hut, although their predecessors in the region had dwelt in huts of snow or wood, whose ruins could still be traced in numerous places along the coast. Loose stone boulders held down the edges of the Copper Eskimo tents; pillars of stone (in many cases flat slabs of dolomite easily piled one on top of another) supported kayaks, sleds, and other goods that were temporarily abandoned during the summer months; and heaped-up boulders protected caches of meat or clothes from the ravages of foxes, wolves, and birds; but any real construc-
324 tion in stone was conspicuously lacking. There were no stone knives or adzes,
412 no arrow heads tipped with stone, no stone sinkers for fishing lines or nets, and no stone scrapers for use on wood or hides, although implements of all these types had been used by the earlier inhabitants and were sometimes gathered as curiosities by the Copper Eskimo themselves. There were stone hammers and whetstones, it is true, but these were merely unshaped pebbles picked up when
[415] the need arose and afterwards discarded. In short, stone provided the material
[354] for two objects only, the lamp and the cooking pot; and the stone cooking pot
[177] was discarded soon after our visit in favour of iron vessels brought in from the outside.

135

Figure 1. Lamp of native copper. IV.D.1441. 1/1.

324 These two vessels, the lamp and the cooking pot, were invariably made from
415 soapstone (tale chlorite schist), originally with copper-bladed adzes, but in our
354 time with adzes of iron. Freshly quarried soapstone readily scratches with the
316
[135]

fingernail, so that the labour of manufacturing even a large vessel was comparatively slight, never requiring more than a few days. We saw no pots made of any other material, but from Prince Albert Sound we obtained two lamps, one fashioned from a red sandstone, the other from an igneous rock, that could hardly have been hollowed out with adzes in the ordinary way, but must have been shaped by some pecking and grinding process. Their owners knew nothing about their manufacture, and there is good reason to believe that they were not made by the Copper Eskimo, but came in from Hudson Bay.[1]

As stated in the introduction, the natives considered their amygdaloidal copper,[2] which took the place of stone, bone, or ivory in so many of their implements, as merely a peculiar stone that they could work into shape, cold, by hammering with boulders and pebbles (Figure 1). Whether they were able to drill copper before they obtained iron is uncertain; if so, they must have used stone- or copper-pointed drills. In our time they still retained one or two of these copper-pointed drills, but used them, so far as we observed, only on bone, antler, and wood.

Figure 2. Lump of galena, used for marking skins. IV.D.288. 1/1.

The only important mineral besides copper was iron pyrites, which the Eskimo gathered mainly in the beds of two streams, Kugaluk River in the southwest of Victoria Island and a creek a few miles east of Coppermine River. There were other sources, however, that I failed to record. This mineral served the natives instead of flint and steel for striking fire. They possessed also a few fragments of galena (Figure 2) and litharge, which they used for marking skin and wood; the galena came mostly from Galena Point in Bathurst Inlet, but the source, or sources, of the litharge is not known.

BONE, ANTLER, HORN, IVORY

The caribou and the musk-ox supplied nearly all the bone that the Copper Eskimo required, although for shoeing the runners of their sleds they used rib bones from occasional whales that drifted up on their shores. There was hardly a bone in the two land animals that could not be turned to some purpose. Leg bones were in special demand for skin stretchers, for needle-cases, and for sheathing the wooden ends of harpoon shafts; another type of skin stretcher was fashioned from a caribou or musk-ox shoulder blade. The ribs served for handles of various kinds, for small toggles, pins, and bows for the drilling set. Other toggles were made from the breast or pelvic bones, and the astragalus provided a ready made mouthpiece for the drill.

The caribou alone provided antler, which was just as useful as bone, and interchangeable with that material for most purposes. On the other hand, ivory, which Eskimo elsewhere often substituted for bone and antler, was extremely rare, because neither the narwhal nor the walrus frequents the waters adjacent to the Copper Eskimo territory; consequently, the few ivory objects we saw among the natives almost certainly reached them by trade from the east or the west. Sheep likewise were absent, so that all the horn in use came from the musk-ox. This horn sometimes took the place of bone or antler, but it was especially prised for the manufacture of ladles, scoops, drinking horns, toggles for the sled, and hammers for pounding blubber.

Originally the Copper Eskimo used only four tools, all with copper blades, for shaping bone, antler, and horn, viz., the adze, the whittling knife, the grooving

[1] See p. 68.

[2] For the sources of this copper see Reports of the Canadian Arctic Expedition, vol. XII, pt. A, p. 89; vol. XI, pt. A, p. 50 et seq.

321 412 tool and the drill. In our time nearly all these tools had steel or iron blades, and a fifth had been added, a small saw with a blade of hoop iron. Saws were not numerous, however, and it was still a common sight to see a native scoring deep cuts in bone or antler with his grooving tool and then breaking out sections with his adze. The curved whittling knife gave the final shape, and rubbing, first with stone or sand and then with a strip of hide, the smoothness and polish. Musk-ox horn alone was susceptible of a different treatment; to make from it ladles and scoops, the natives split it longitudinally, steamed it over their cooking pots, then opened it out and bent it to shape by simple pressure and hammering.

• 237 There was current among the Copper Eskimo one other substance similar to the foregoing, baleen, but it was rather scarce, and in the eastern part of the territory almost unknown. Whether it came from stranded whales, or was brought in from the west, I did not discover. The natives used it, apparently, 232 for fishing lines only, lines mainly for catching tomcod during the winter months 229 when the more usual lines of sinew tended to become brittle with encrusted ice. 283 I never saw them cut or split baleen, but doubtless they used the whittling knife for this purpose.

HIDES AND SINEW

237 [433] It is hard for the civilised inhabitant of a warmer country to realise the immense importance of skins in the domestic economy of the Copper Eskimo. They provide him with clothes and bedding throughout both winter and summer, bags in which to store his clothing, a tent for use nearly half the year when a snow-hut was either uncomfortable or impossible, a cover for his kayak, straps and lashings for his sled, harnesses and traces for the dogs, lines and lashings for harpoons and other weapons, packing lines, dog packs, water buckets, pokes for meat and blubber, and other articles for which Europeans utilise cloth, rope, or metal. It was, consequently, of the utmost importance to the native that he should know how to treat skins to the best advantage. Fortunately, the two animals on which he depended most for his food, the seal and the caribou, were precisely the ones whose hides were the most useful.

281 [225] *Seal Skins.* The Copper Eskimo had two methods of skinning a seal. They generally made a cut around the base of each flipper, another around the neck, and a third down the belly, after which they separated the skin from the blubber with a knife. As it was impossible to remove all the blubber in this way, the [462] skin was then soaked in warm water. Holding one end in her mouth while the [412] other remained in the pot, the woman (for the work almost invariably fell on the housewife) scraped it thoroughly with her curved knife. As soon as the weather was warm enough she set it out to dry, sometimes on top of the house, sometimes on the ground, sometimes pegged over and around a block of snow.

A sealskin thus dried was roughly oval in shape and still retained the hair [415] on the outside. If you folded in the ends, doubled it over and tied a line to [492] each end, you had the common Copper Eskimo fishing bag; if you laced each end across through the holes by which it was pegged out, you had a dog pack, broad and flat in the middle where it rested on the animal's back, and 281 bag-shaped at each end for holding the meat or clothing. The hair was no 294 disadvantage in such skins; indeed, for raincoats and for spring foot gear it was indispensable, but as the skin was more supple without it, it was generally removed by resoaking in warm water and scraping with a knife. To soften the skin still more, and to change the outer surface from a dark colour to white, it was subjected to further scraping, and, after drying, rubbed between the hands and chewed between the teeth, when odd scraps that came away found lodging in the chewer's stomach. From these creamy white skins were made the sealskin

28 a large hole where these protruded through and two small holes that marked
224 the eye sockets. The ears he usually cut off at the roots, and pulled them out of the skin with his teeth at his leisure; but in certain circumstances, when it was forbidden to use a knife, he pulled free the outer integument on the spot.

In the late spring, when the caribou was putting on a new coat, the winter
281 hair remained longest on the throat and belly. As this part was useless for
221 clothing, the hair being prone to shed, the Eskimo frequently preserved only the
224 part on which the new coat had already formed and threw the rest of the skin away. In such cases the preliminary incisions for removing the skin followed the outlines of the short hair. Often, however, the native anticipated the natural shedding of the winter hair by pulling it out with his thumb and fingers, leaving the new coat very short and spotted with white hairs, but in this condition highly prized. Later in the season, when the belly of the animal was covered with short white hair, invaluable for trimming, he made a cut along each flank and removed that part of the skin before detaching the remainder.

281 Blood stains were extracted by rubbing or stamping the skin in hard snow, which acted like damp blotting paper; or by steeping it in cold water and squeezing the hair. The Copper Eskimo woman was very careful not to allow a green skin to dry before scraping away with her curved knife the fat that still adhered to it; and as these scrapings were pure fat, she generally ate them at once, or put them aside for future consumption. Then she stretched the skin out to dry by pegging it to the ground with sticks or weighting down the edges with stones; the white belly skin and the large short-haired skins intended for bedding she always pegged down in order to stretch them as much as possible.
[484] When travelling across country day after day in the short Arctic summer, the skin was laid over the back of the pack or across a long pole; and at every halt it was stretched out afresh on the ground to hasten the drying, because a green skin weighed twice as much as a dry one. Once the skin was dry it could be
[412] laid aside and not touched again until needed. Then the owner sewed up the rents and scraped the whole underside with the copper- (now iron-) bladed
[462] scraper (See p. 84). The woman (or man, for the men often scraped skins while the women sewed them) sat back on the sleeping platform, or on the ground outside the tent, and stretched out the skin in front of her. Holding it
[516] tightly pinioned at the bottom between her crossed legs, she pulled it taut above the knee with her left hand and scraped rapidly downwards away from her with the right. A sudden relaxation of the leg, and a quick jerk, found her scraping in a new place. To the onlooker her body seemed strained and her attitude very uncomfortable, but long practice greatly reduced the fatigue, though the labour really was hard. Indeed I have seen the perspiration rolling down a woman's face as she scraped a skin outdoors when the temperature was below zero Fahrenheit.

[262] The Copper Eskimo woman often ate the scrapings that came away during this operation, although they contained very little fat. To soften the skin still further she rubbed tepid water over its under surface, folded it up, and laid it
[239] on one side for a few hours. Then she scraped it again, this time with an
[412] instrument made from the shoulder blade of a musk-ox, which merely stretched and softened the skin without removing anything from its surface (See p. 83).

28 The stretching and softening of the skin was usually the last process it
29 underwent before it was made up into clothing. If, however, the woman desired
[412] the skin without fur, as for making the upper legs of her long boots, she scraped the hair from the dry skin with her curved knife. Copper Eskimo clothing was
[53] often decorated with red, black, or white bands; the white was the natural
[386] colour of the skin; the red was produced by rubbing with litharge; and the black parts were either untanned sealskin, or else seal or caribou skin stained
[296] with galena. Ordinary dirt stains on white deerskin could be removed with dry snow.

Caribou leg skins were made into dog harnesses, snow mittens, and winter boots. The ears were used to trim the fronts of trousers at the waist line, or the backs and hoods of coats. The light skins of unborn fawns, or of fawns only a few days old, made serviceable clothes for tiny children, as well as summer caps to protect the head from mosquitoes, though for this last purpose marmot skin was often used instead. There were certain fashions in clothing. The heavy winter outer coat (*qulitaq*) was normally made from autumn skins, an adult's coat from the skins of the larger caribou, and a child's coat from yearlings and fawns. The two everyday coats, the *ilupaq* or inner coat and the *kapitaq* or outer coat, were of very short-haired summer skins; so, also, were the trousers, though for winter sealing it was advisable to have the outer pair of the thicker autumn skin. The same principle applied to the rest of the clothing and to the bedding; wherever warmth was especially requisite, autumn skins were necessary; otherwise the Eskimo preferred the light summer skins.

The spring skins of caribou were thrown away except in emergencies, because they were full of holes from the escaping larvæ of the warble-fly, and the hair was shedding to make way for the summer coat.

Other Skins. Polar-bear skins provided very useful "sleds" in spring, when the frozen mud runners of the ordinary sled melted and dropped off. There seems to be an oil in the hair of the polar-bear skin that renders it impervious to water; hence Copper Eskimo travellers commonly used a mitten or pad of bear skin to ice their sled runners. For the same reason sealers preferred a foot-pad of bear skin to one of caribou skin, which sheds its hair with dampness. The natives of Prince Albert Sound and Minto Inlet sometimes used bear skin for clothing, more especially for trousers, because caribou were less plentiful in their districts than farther south. The animal was skinned in the same way as a caribou.

So few brown bears were killed that there was no established use for their skins. Musk-ox skins, on the other hand, were much sought after for bedding, being laid under the caribou skins on top of willow matting. The northern natives sometimes made heavy coats from them.

Hares, foxes, ermines, and marmots were all skinned in the same way. A cut was made up the back of each hind leg and across to the tail, and the skin pulled off forwards. The forelegs were drawn out and severed at the ankles, and the ears were pulled out with the teeth. The tail of the fox, owing to its exceptional length, was often slit half-way down. Hare skins were used only for towels or socks, but fox skins up to at least a generation ago were sometimes made into coats. One of the dance songs popular in 1915 among the Dolphin and Union Strait Eskimo commemorated its use in this way.

The ermine was prized very highly as an ornamental appendage to the coat; consequently, the sight of one of these animals always occasioned the greatest uproar and excitement in a camp.

Of more value to the Copper Eskimo than all the other small animals was the marmot; from its skin they made coats, trousers, caps, trimmings for the tops of snow mittens and boots, and linings for the soles of caribou skin socks. From the same skin, also, they made tool bags and pouches for holding the fire apparatus. As a rule, however, marmot skin coats and trousers were confined to children, because their use by men suggested a lack of skill in caribou hunting. The natives of Victoria Island obtained their marmot skins by barter, as the animal does not extend beyond the mainland.

The Copper Eskimo killed very few wolves or wolverines until they obtained rifles and traps. We saw one man wearing a heavy coat of white wolf skins, and wolverine skins were probably put to similar use; at all events the natives readily made a sleeping bag from wolverine skins for a member of our expedition. They skinned birds in exactly the same way as small animals, except that

223 They skinned birds in exactly the same way as small animals, except that
237 they tore the skin of a small bird down the legs without cutting it, and, when
825 drawing the skin over the head, held the feet in the teeth instead of tying them
136 to a tent-pole or other convenient object. Loon skins made excellent whisks for beating off the mosquitoes. The bill of the largest species of loon, *Gavia stellata*, was frequently sewn to the top of the dancing cap; and the feet skins [301] of swans, geese, and ducks converted into tinder bags. Every household had its [416] stock of ptarmigan skins for use as dusters, and to wipe the hands and face after [515] eating or handling blubber; one skin served the whole family and all its visitors until every feather was worn out. The Eskimo used other bird skins for the [962] same purpose, especially sea-gull skins, the oily feathers being naturally more suitable for towels than ptarmigan feathers. The skins of fish were usually [294] eaten. The Copper Eskimo, unlike others of their race, never made any real clothing from fish or bird skins, although sometimes they stuffed a few feathers or the skin of a loon inside their sealskin shoes.

women's. Figure 20 shows a rather unusual type of dancing cap, made entirely from sealskin. Most were of short-haired caribou fur, decorated with parallel white bands, or with bands in white, red, and black exactly like outer stockings; many lacked even the fur base, the parallel bands forming the entire body of the cap. Here and there were attached clusters of creamy caribou-skin thongs, and to the crown a white weasel skin that trailed down behind (Figure 21). Inset in most caps, too, from one side to the other over the peak, was the head and neck of a loon, so split that the bill projected upward. Figure 22 shows a typical specimen.

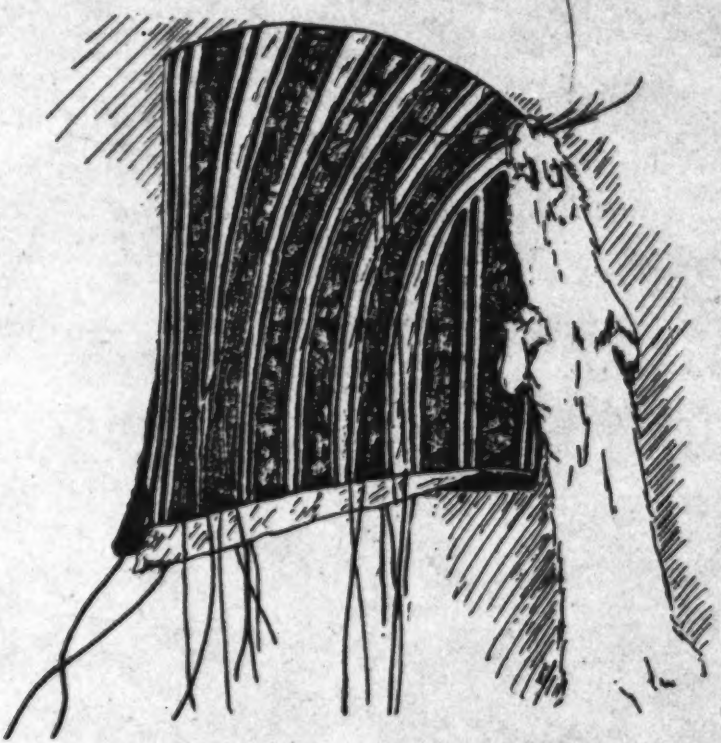

Figure 21. Dancing cap, of caribou fur, with lemming-skin pendant. IV.D.574. Approx. 1/2.

This loon-head ornament probably originated from the use of a complete loon-skin head-dress, such as was current on the Arctic coast of Alaska down to the second half of the nineteenth century.[1] I have never seen a specimen, but

[1] Cf. Simpson, John: The Western Esquimaux: a selection of papers on Arctic Geography and Ethnology reprinted and presented to the Arctic Expedition of 1875, p. 348, London, 1875.

[TEXT CONTINUED ON PAGE 31]

28: Jenness E-5 (1914-1916) 1946
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Figure 22. Dancing cap of caribou fur, with lemming-skin pendant and loon's bill. IV.D.977. Approx. 1/3

I have never seen a specimen, but a native of that region told me that the skin was split down the middle of the back so that the long wing feathers would fall over the dancer's shoulders. The bill, after careful cleansing, was whitened with gypsum, and, whenever possible, one of the valuable blue beads that reached this area from Siberia was tied to the nostril of the upstanding bill. The dancer also planted a long wing feather on the front of his head, and one on each side. Only the skin of a yellow-billed loon (*Gavia stellata*) was acceptable for such a head-dress; any other skin would have excited ridicule.

Mittens. The ordinary mittens (*poalluk*) were very short, covering the hands but leaving so much of the wrists bare that, unless protected by long coat sleeves, they were often severely frost-bitten. Adults seemed very indifferent to this defect, though they sometimes finished off the edges with long-haired fringes of white fur that afforded some slight protection; but mothers often lengthened the mittens of their children.

Most of the mittens were single, with fur on the outside only, where it covered the whole surface (Figure 23*a*). A few were made double to carry fur on both sides (Figure 23*b*); others had fur all over the outside, except on the palm, where it was inside (Figure 23*c*); and a type that usually bore two or three ornamental bands of white fur around the wrist, or across the back of it, had no fur at all on the palm, inside or outside (Figure 23*d*). The last type was much in vogue for dances because it furnished a better grip on the heavy drum-handle, but whether it developed on this account is not known.

Most short mittens were made from the brown summer skins of the caribou, but some were also made from the heavier white winter skins. Naturally only those made from the brown summer skins carried the insertions of white fur. One occasionally saw mittens of polar bear skin or sealskin, which were stiffer and (the sealskin ones at least) not so warm as caribou-fur mittens, but, unlike the latter, did not shed their fur with dampness. They were particularly serviceable, therefore, for such tasks as icing the sled runners.

If we leave out of consideration the white insertions just mentioned, every mitten was cut out in three pieces. One piece gave the palm and half the thumb; a second, the front of the wrist and the back of the thumb; and the third formed the whole back of the mitten. The general pattern can be seen in Figure 24.

Besides his short, everyday mittens each man owned a pair of long ones (*atqatik*) for working with snow, and especially for building the snow-hut (Figure 25). It was made, preferably, from the leg skins of the caribou, on which the long hair lies smooth and flat; and it covered the sleeve of the coat to about the middle of the forearm, where a sinew drawstring that passed through a narrow band of dehaired skin, doubled back and sewn all round the upper edge, checked the penetration of the snow. Being solely a working mitten (whence it commonly received another name, *savaktotik*, i.e., "working garment") it carried no ornamentation and was furred on the outside only. Like the shorter mitten, it was cut out in three pieces.

Trousers. Women, like men, wore two pairs of trousers (*natikkak*) in winter, and only the inner pair in summer; but as their stocking covered more of the leg than the men's, their trousers were shorter and did not reach the knees. 291 192

The inner pair was rarely if ever decorated. The outer often had coloured stripes down the outside of each leg, and, in the middle of the front, a triangular gusset of white fur, with its two sides parallel to the white or coloured edges of the stockings. To enhance the symmetry of the arrangement these two sides also carried at times an edging of coloured bands (Figure 29). 291 531

So far as I know, women never used drawstrings on their trousers, but secured them with a sealskin thong fitted with loop and toggle. 291

Shoes, Socks, and Mittens. These were in no way different from those worn by men. Women, of course, did not possess the long working mittens that reached half-way up the forearm.

Waterboots. The woman's waterboot (Figure 30) had the shape of the stocking beneath it, which above the foot differed entirely from a man's boot or stocking. After fitting tightly around the ankle it expanded rapidly upward, attaining just above the knee a diameter of from 10 inches to over a foot. The outer side of the boot (or stocking) then tapered to form a wide strap that tucked over the belt holding up the trousers.

In the foot it did not differ from a man's boot. Like a man's, too, the leg had only one seam, straight up the middle; but in so large an expanse of skin there were generally two or three holes, from wounds and other causes, that required covering with round patches.

Outer Stockings. The waterboot replaced in summer the outer stocking (*ipiya.k*) of caribou fur, which bore the same peculiar shape as the boot, but was frequently decorated after the manner of the man's outer stocking. Commonly all the upper edge, from the inside of the knee to the top of the strap that tucked into the belt, was bordered with several parallel rows in red, white, and black (either the black or the red, but more commonly the red, might be omitted). From the strap to the foot, down the front of the leg, ran another broad band, similarly coloured, and a third, or else two or three rather narrow bands inserted an inch or two apart, extended half-way around the ankle or completely encircled it (*See* Figure 31). There were numerous modifications of this pattern, however, as in the patterns on men's stockings. For example, the coloured stripes varied greatly in number; they were often replaced by broad or narrow bands of white caribou fur; and the decoration down the front of the leg was frequently omitted (*See* Figure 32). 292 531 [192]

The feet of both outer and inner stockings were made preferably from caribou leg skins, but not infrequently from marmot fur. In spring some women replaced them with feet of haired sealskin. The rest of the garment was derived from the body fur of the caribou. 291 292 237

Inner Stockings. These corresponded in shape with the outer, and bore the same name, *ipiya.k*, but were almost invariably plain. In fact, I have seen only one decorated pair, a specimen that came from Prince Albert Sound. It bore the usual red, white, and black stripes, but they were inserted on the hairless, unattractive side, as the stocking was worn with the fur side in. Around the ankle was an additional design, the YII pattern that women tattooed on their arms and etched on their needle-cases, here produced by running stitches of very narrow sealskin (Figure 33). This design was very rare on garments, but occurred also on a woman's coat and on a pair of women's outer stockings that we bought in Coronation Gulf. 291 531 [192] [304] [294] [126]

ADVANTAGES AND DISADVANTAGES OF COPPER ESKIMO CLOTHING

291 [296] Some of the disadvantages of Copper Eskimo clothing have been mentioned already. The caribou fur shed its hair with dampness, and the shoes and boots soled with the skin of the common seal quickly wore out on stony ground and required almost daily patching during the summer months. The swarming mosquitoes of midsummer frequently assailed the only half-covered knees and wrists; the high-waisted coat hardly checked the winter gales from chilling the stomach; and the rather scanty hood could not shield the forehead and cheeks from frostbite. Despite these defects the costume of the men was extraordinarily well adapted to the climatic conditions, and capable of very little improvement with the meagre resources at their command. It was both lighter and warmer than woollen clothing of proportionate bulk, and at the same time much healthier, because it allowed the air to circulate freely under the trousers and coat. The four-layered footgear was eminently practical, being much easier to dry over a blubber-burning lamp than the thick-furred two-layered footgear, fitting tightly around the legs of long breeches, which has long been fashionable among the Eskimo of the Mackenzie River delta and northern Alaska. The women's costume, however, was much less satisfactory. The wide shoulders and enormous hood were wholly unnecessary, and the latter both heavy and cumbersome. Worse still were the ridiculous stockings, which hardly protected the legs even in mild weather, and in blizzards frequently filled with snow. More than one woman had lost her toes by wearing them, and many had incurred severe frostbites.

296 The Copper Eskimo took great care of their clothing, as was only natural, seeing that skins were never too plentiful and the labour of dressing them, cutting them out, and sewing them together was considerable. The first thought of every native on entering a snow-hut was to beat the loose snow from his clothing with the stick that each household provided for that purpose. Spare clothes were packed away in large seal- or caribou-hide bags, which were stored in winter either in a cavity under the sleeping platform or on the roof of the snow-hut beyond reach of the dogs; in summer they were deposited on high caches under other possessions, or buried beneath mounds of stones. [294] [281] Strips of white fur from the belly of the caribou received special attention on account of their value for insertions, and the women carefully cleansed them of all dirt and blood-stains with soft snow.

ADORNMENT

301 237 *Ornaments and Charms Attached to Clothing.* Men's coats often trailed on the back white lemming skins, arranged with the usual regard for symmetry. There were generally three skins, one attached to the back of each shoulder and the third spaced half-way between them at a somewhat lower level (*See* Figure 36); rarely there were five, arranged in the same fashion, but, of course, closer together, and forming a slightly curved line parallel with the lines at the neck and waist. A native who owned only one lemming skin generally sewed it midway between the shoulders, but at times suspended it from a button in the small of the back. This button, made of bone, musk-ox horn, or, rarely, the boiled albumen of a bird's egg (Figure 37), appeared quite frequently on the everyday outer coat, and was an integral part of the heavy winter coat used in sealing, where it served to attach both the hunter's foot-pad of polar bear or caribou fur and the bone pins with which he closed the wounds in his seals. Men seldom affected other ornaments, but one Prince Albert Sound Eskimo wore a bandolier of musk-ox fur, and another a bandolier of polar-bear claws suspended from a strap of caribou hide (Figure 38).

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Figure 26. Lemming-skin pendant on the back of man's coat. IV.D.267. Approx. 1/3.

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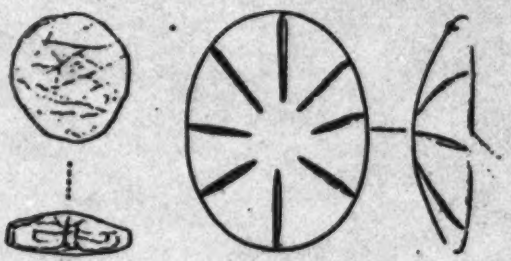

a b

Figure 27. Buttons for the backs of men's coats; a: of boiled albumen, IV.D.618, 1/1; b: of bone, IV.D.1084, 2/1.

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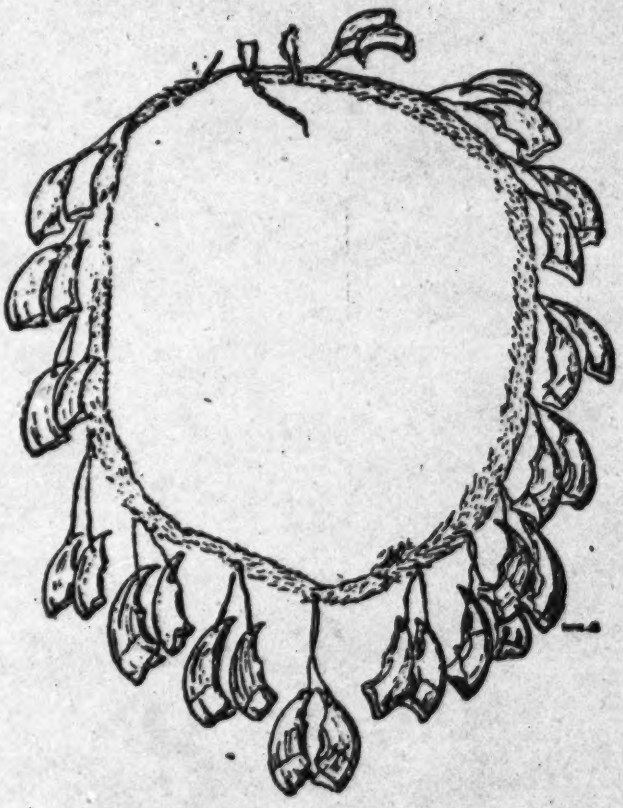

Figure 28. Caribou-fur bandolier with claw pendants. IV.D.62. 1/2.

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Women occasionally strung a row of small bones (Figure 39) or of caribou incisor teeth across the fronts of their coats, but other appendages to their clothing were not so much ornaments as charms. Every mother who carried a baby sewed to her coat some object that she conceived would make the child a skilful hunter or an efficient housewife when it grew up; and she transferred it to the child's clothing as soon as it was old enough to run about. The commonest of these charms were small bones or pieces of fur from a caribou or seal that had been killed by a near relative, e.g., an uncle or a grandfather. Thus, the combination coat and trousers of one little boy carried a string of caribou fur on the chest and another on the back of the left shoulder. Another child wore on his belt a strip of fur from the forehead of a caribou; to the coat-shoulder of a third were sewn three or four feathers from the tail of a redpoll; and a fourth dangled a tern's bill from his back.

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Figure 38. Chain of fox bones from the front of woman's coat. IV.D.371. 1/2.

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The bone (rarely wood) belt toggle might perhaps be regarded as an ornament, because though generally invisible, it was often decorated with incised lines (Figure 40). A very small toggle on one child's belt (Figure 41) was perforated from side to side, and so closely resembled the toggles attached to needle-cases that it may have been diverted from its original purpose.

bone, and seldom exceeded 4 inches in length. The teeth, which generally numbered from five to seven, were cut with the man's grooving tool, and a hole was nearly always drilled in the upper end for attaching the article to the needle-case. Most combs were simply cut off in a blunt point at the top, and though at times this shape was slightly modified, there was never any attempt at ornamental carving. Even the surface was rarely etched, and then only with two or three straight lines or with the ring-and-dot pattern. Typical specimens are shown in Figure 42.

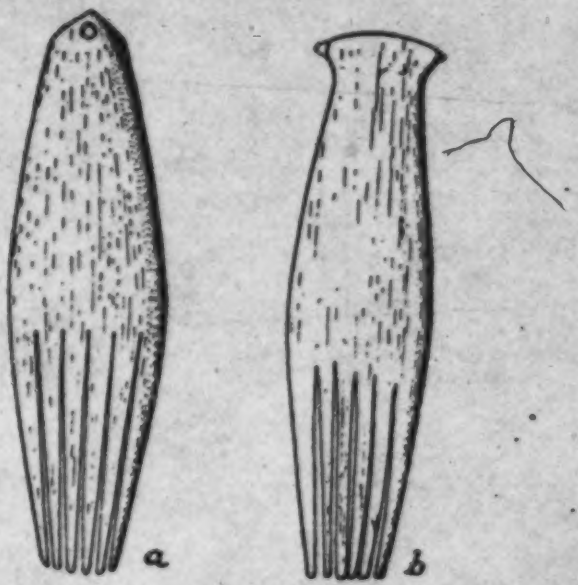

Figure 42. Women's combs. IV.D.1082, 988. 1/1.

Snow goggles (Figure 43), made of wood or antler, had the shape usual among all Eskimos. Projecting brow-pieces to intercept light from above were not uncommon. The cord was of sinew or sealskin. The slits were of even width, rarely widened at the inner end as in many goggles from Hudson Bay. Ornamentation was absent.[1]

Tattooing. The appearance of the women was greatly affected by tattooing. Only two men were seen with tattoo marks, which in both cases consisted of two short lines across the bridge of the nose. The marks on one man, a native from Coppermine River, had no significance that I could discover. He stated himself that they were due to an arbitrary whim, but I strongly suspect that

[1] See Plate VI in Report of the Canadian Arctic Expedition, vol. XII, pt. B, p. 760.

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CHAPTER III

HOUSEHOLD FURNITURE

FIRE-MAKING

372 The Copper Eskimo were familiar with the method of making fire by means of the thong drill, but rarely practised it because it involved strenuous labour and suitable wood was rare. The handles of some of their whittling knives and other tools had small holes to fit the top of the spindle, for a man pressing down with both hands could exert greater force than was obtainable with the usual drill mouthpiece. Figure 46 shows the hearth of an old fire-making apparatus; the specimen was discovered on the beach at Kater Point, close to Bathurst Inlet.

372 316 The ordinary method of making fire was by striking together two pieces of iron pyrites, for which there were several sources around Coronation Gulf, the two best known being Kugaluk River, which flows down from the Colville Hills in southwest Victoria Island into the sea behind Cape Kendall, and a small river a few miles east of Coppermine River. The pyrites was occasionally covered with sealskin or caribou skin to protect the hand.

372 237 415 824 The spark was caught in willow catkins contained in a small disk-shaped bag of sealskin closed with a circular lid of the same material (Figure 47). A little blowing soon spread the glow over a large surface so that it could ignite a lamp-stick or a bunch of matted moss roots dipped in blubber. To foment a flame, however, most Eskimo kept a little stock of dry grass, which, like the lamp-wick of eriophorum seed, they carried in small bags made from the lining around the heart of some animal (Figure 48), from the skin on a loon's foot (Figure 49), or from caribou or marmot fur.

Figure 46. Wooden hearth of fire drill. IV.D.219. 2/3.

LAMPS

354 Many writers have stressed the fundamental importance of the Eskimo blubber lamp, without which the natives could not have survived along the northern coast-line. 178 Although in certain regions they have now adopted substitutes such as stearin candles, coal-oil lamps, wood stoves, and primus stoves, throughout large parts of the Arctic the blubber lamp still holds its own.

372 Porsild[1] states that "In Arctic regions proper, train-oil is the only fuel, and there the lamps are large; where other fuel —heather, wood, peat or coal—is available, either the whole year round or only in the summer, the lamp used for burning blubber oil loses its importance as a heater, and is used

113 [1] Porsild, Morten P.: The Material Culture of the Eskimo in West Greenland: Meddelelser om Grønland, vol. LI, p. 218.

354 [511] [171] solely for illuminating purposes. For this, small specimens may suffice. But a surplus of light and heat is inevitably connected with the Eskimo idea of luxury; therefore big lamps are also found in such regions. Conversely, small and rudely made lamps for burning blubber oil are found also in the regions of the Far North.

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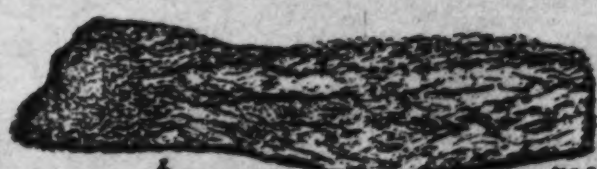

b

Figure 47. Fire-lighting apparatus; a: sealskin tinder-bag containing eriophorum seeds, IV.D.735, 1/1; b: moss-root torch, IV.D.337, 1/2.

354 171 The reason for this may either be lack of material, or these lamps may be intended for some particular purpose—for use on journeys or for illuminating the entrance or corners inside the house."

Hough again, in his well-known memoir,[1] distinguishes three kinds of Eskimo lamps on the basis of their use, viz. the house lamp, the travelling or summer lamp, and the mortuary lamp, the latter frequently being models.

Figure 48. Bag for dry grass, made from the lining around an animal's heart. IV.D.225. 1/1.

Neither of these statements is quite correct when applied to the Copper Eskimo. They had lamps of every size, from 2 or 3 inches long up to 50 inches; and small vessels 8 or 12 inches long were as common as lamps of 30 inches. From June to September or October, when most of the snow had melted from the land and the families were scattered in search of fish and caribou, the natives generally cached their lamps with the sleds on the seashore or on the margins of lakes, and used for fuel dwarf willow, heather, *Dryas integrifolia*, and other plants, instead of blubber. Consequently, they had no special summer lamp. But because their ordinary lamp seldom functioned during the summer months we cannot say with Porsild that it had lost its importance as a heater. It still remained the indispensable prerequisite of existence during two-thirds of the year for heat as well as for light.

[1] Hough, Walter Ann. Rept. Smith. Inst., U.S. Nat. Mus., 1898, p. 1008.

Lamps only 2 or 3 inches long were children's toys, often made by themselves while their parents were manufacturing larger vessels. The Copper Eskimo placed on the graves of females these miniature lamps, or else genuine vessels of small size, simply because they valued their larger lamps too highly to throw them away, and believed that the dead person could enlarge a miniature to suit its needs. Frequently, perhaps generally, they recovered useful lamps that had been deposited on the graves of relatives a few years earlier. Very rarely did they make a lamp, even a miniature one, for mortuary purposes only; and when they did, it was nearly always a wooden model, because soapstone was procurable only in one or two districts.

Figure 49. Bag for grass or eriophorum seeds, made from loon's foot. IV.D.224. 1/1.

Most of the cooking was done on lamps not less than 24 inches long. Lamps smaller than this, even down to 5 and 6 inches, served for short journeys, but were not intended primarily for that purpose any more than to be deposited on graves. Rather they were used to dry extra clothes, to give additional light for sewing or working, or to enable a little girl to play at housekeeping in a corner of the hut. Two small lamps laid side by side sometimes took the place of one large lamp for cooking. When these smaller specimens were made of soapstone the shapes were the same, and the workmanship as careful, as in the larger ones. Frequently, however, a family was content to use a water-worn pebble with a saucer-shaped depression, or a naturally hollow slab of limestone or dolomite.

If we exclude the makeshift lamps last mentioned there was really only one kind among the Copper Eskimo, the regular house lamp, of which the smaller specimens, when not mere toys, were generally used for light alone, the larger for both light and heat. Nearly all were made of talc chlorite schist, a soapstone that is soft, of even texture, easily worked with stone or copper tools, and not liable to crack and break under the low heat of the burning blubber.[1]

[1] In their spring treks the Eskimo sometimes rested the lamp directly on two snow blocks and kept them lighted for a considerable time without other effect than the gradual melting of the snow.

No other Eskimo group seems to have used lamps of this type unless derived by them in trade from the Copper Eskimo, for their convenient shape and large size caused them to command an extensive market. Not only were they bartered from group to group throughout the Coronation Gulf area, but they were traded along the coast to the Netchilik Eskimo of King William Island, and westward beyond the natives of Mackenzie delta to Barrow.[1]

Their value naturally increased according to their distance from the source of supply. Thus, on the west coast of Victoria Island, when the small 12-inch lamp (Figure 55) fell and shattered its back rim, its owner, or more probably her husband, did not discard it, as she would probably have done in Coronation Gulf, but made an entirely new back piece of wood, which she lashed through three holes with cords of sealskin or plaited sinew.[2] The larger lamps, of course, were mended everywhere, sometimes with another piece of soapstone, more usually with wood, which was cemented with seal blood and secured with lashings.

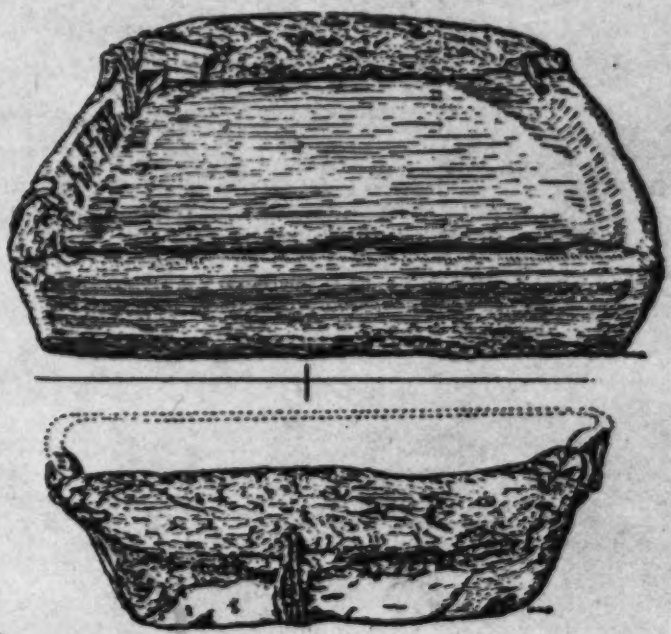

Figure 55. Lamp repaired with wood. IV.D.1000. Approx. 1/2.

The National Museum of Canada possesses two very shallow ellipsoidal lamps, obtained in Prince Albert Sound, that have no partitions, are rounded on the bottoms, inside and outside, and must be tilted forward to permit the oil to flow to the wick. One (Figure 56), 15½ inches long by 8½ inches wide, has been

[1] Cf. Simpson, John: The Western Eskimo: Arctic Papers for the Expedition of 1875, London, 1875, p. 267.
[2] The specimen is too heavily encrusted with blubber to determine the exact material of the lashings.

two or three stones supported the lamp; and on short winter journeys, when the lamp served only for light, it was simply placed on a block of snow. As already stated, it was seldom employed during the summer months.

Unlike nearly all Eskimo tribes the Copper Eskimo seldom or never used moss for the lamp-wick, but substituted the seeds of the cottongrass, *Eriophorum angustifolium*, or, more rarely, the catkins of the dwarf willow, either of which gave a more smokeless flame. *Eriophorum angustifolium* matures about the beginning of September, and it was at that season the women gathered the seeds into small bags made of loon skin, marmot skin, or other convenient material. They gathered a large supply, as in midwinter the wick needed daily renewing; and they deferred the separation of the seeds from the stalks until leisure moments in camp.

Lighting and Tending the Lamp. The Copper Eskimo lighted and tended their lamps in the same way as the Eskimo of Smith Sound[1] except that they did not chew the blubber and spit it into the lamp. The housewife took out of a sealskin poke two or three stripe of blubber a foot or more long by several inches wide, and with a specially designed hammer of musk-ox horn (*See* Figure 63) pounded them on the table to break up the cells.[2] She then laid them in the well of the lamp, when a little oil began at once to accumulate on the bottom, unless the weather was extremely cold. In this oil she soaked her eriophorum seeds, and arranged them along the lip of the lamp in a continuous line so that their lower edges touched the bottom of the well (or at least dipped into the oil that shortly accumulated), and the upper edges projected about a quarter of an inch above the rim. To light the wick she pinched it up into little points 2 or 3 inches apart, which readily caught fire from the torch; and by patting up adjacent parts of the wick with her lamp-trimmer she quickly produced a continuous smokeless flame rising to a height of about three-quarters of an inch. As the heat melted the oil out of the stripe of blubber, she removed them to the back shelf of the lamp until they drained; then, later, she threw them to the dogs. Sometimes, if the lamp already contained a certain quantity of oil, she placed fresh stripe of pounded blubber on the same shelf instead of in the well, so that the oil would not accumulate too rapidly and drip over the outer edges of the lamp. The Copper Eskimo had no device for melting the blubber on a stick or shelf, such as was common in both the eastern and western Arctic.

Hough[3] says that lamp-trimming "only reached perfection in the old women of the tribe, who can prepare a lamp so that it will give a good, steady flame for several hours, while usually half an hour is the best that can be expected." This is not true of the Copper Eskimo. There, the women naturally have more experience than the men, and on the average are more skilful, but many a hunter can tend the wick just as successfully as his wife. A lamp is seldom allowed to smoke; one of the inmates, be it the man, his wife, or even one of the children, is sure to notice it and put down the wick.

The same writer states in another passage[4] that "the lamp and the pot usually agree as to size, the rule being that the length of the pot shall be equal to the length of the wick edge." Among the Copper Eskimo, as in Smith Sound and, I believe, elsewhere, the sizes of the two vessels bear no direct relation to one another. For obvious reasons the wick edge of the lamp should be no shorter than the bottom of the pot; but it may be, and often is, much longer, for with her lamp-trimmer the housewife can readily adjust the flame to whatever length she desires.

[1] Cf. Boas, F.: Contributions to the Ethnology and Anthropology of the Polar Eskimos. Meddelelser om Grønland, vol. XXXIV, p. 591.
[2] Polar bear fat was occasionally used instead of seal blubber, and probably fat of any kind in emergencies.
[3] Hough: op. cit., p. 1054.
[4] Hough: op. cit., p. 1057.

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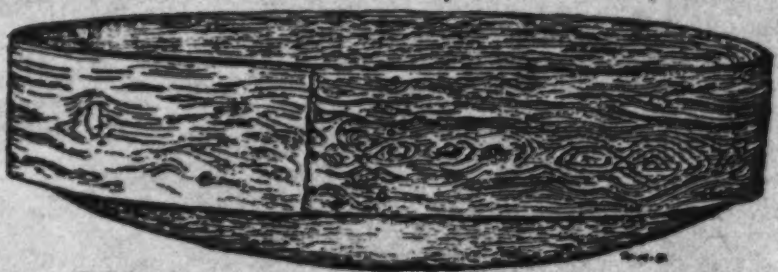

Figure 72. Oval dish, made from two pieces of wood. IV.D.625. Approx. 1/4.

Figure 73. Dish hollowed from one piece of wood. IV.D.626. 1/4.

WATER BUCKETS

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281 The bucket for carrying water (Figure 74) was made from tanned sealskin, and fitted with a strap handle of the same material. Its usual capacity was slightly over a gallon. The vessel lasted much longer than might have been expected, because holes and small rents could be quickly patched without impairing its tightness. As with our canvas buckets, ice that formed on the inside was broken loose by hammering on the outside with a stick.

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[191 When travelling in winter, a few Eskimos carried on the back, under the clothing, a cylindrical water bottle (Figure 75) made from the gullet of a seal. The stopper was a wooden plug lashed inside the mouth of the bottle. Similar "thermos" bottles were known in the eastern Arctic also.

Figure 74. Water bucket, of sealskin. IV.D.618. 1/4.

MEAT FORKS

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321 Meat forks, used for testing and removing the meat from the pot, but not for eating, were made of bone or musk-ox horn, more rarely of antler. Most were slender, tapering pencils, slightly curved, ranging in length from about 7

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to 12 inches. Often they were flattened at the broader upper end, whose edges were not infrequently serrated (Figure 76).

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Figure 76. Water bottle, made from the gullet of a seal. IV.D.281. 1/2.

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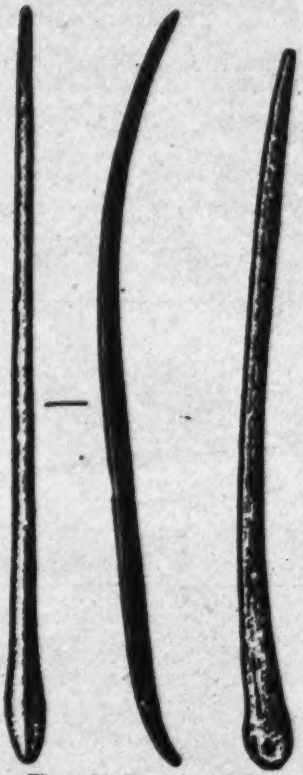

Figure 76. Bone meat forks. IV.D.891, 698. 1/2.

Figure 77. Meat fork, decorated. IV.D.1092. 1/2.

A very unusual meat fork obtained by Captain Bernard in Coronation Gulf is shown in Figure 77. It has four prongs, and the shaft is ornamented with incised crosses, parallel lines, and the ring-and-dot pattern. It might almost be mistaken for a peculiar kind of comb, but Captain Bernard stated that it was actually used as a fork.

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meat; the smaller ones, which had a special name *qimalik*, for cutting and trimming skins. In shape, they were practically identical, except that the smaller tool often had a more rounded edge than the tool used for cutting meat.

Women's knives, like men's, often had sharpeners attached to them by a cord of sinew. The earlier sharpener was the tooth of some animal, often the molar tooth of a musk-ox or bear; or a whetstone made from sandstone or other gritty rock; or a stick of copper mounted in a bone or antler handle (Figure 86). By 1914, nearly every native was using a fragment from a file, or the firing pin of an old rifle. Men generally used their sharpeners as a butcher uses his steel, but the women held the steel in the left hand and ran the edge of the blade to and fro along its surface.

Figure 86. a: whetstone, IV.D.77; b: copper knife sharpener, IV.D.1361. 1/1.

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Skin Scrapers. The scraper used to remove the fat and inner tissue of skins had a small copper blade with a curved edge mounted on a long handle of antler. Today, in this as in other implements, iron has taken the place of copper. The handle was nearly always forked, the branch-prong preventing the hand from sliding forward. Most specimens had also a notch for the forefinger cut in the under side. Figure 87c shows a typical specimen; its iron blade is fastened by two copper rivets to the handle, which has been flattened on its lower face. Its prototype with a copper blade is shown in Figure 88.

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322 especially the lower arm of the front notch, which carried the weight of the line; consequently, this notch was often built up by splicing a short projecting piece of wood to the under side of the rod. Sometimes a bone pin was inserted about the middle of the rod, on its upper surface, for shortening the line a little; for in shallow lakes the line was lowered until it touched the bottom, then raised a few inches with a turn around this pin, and fastened with a half hitch to the lower arm of the front notch.

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The second type of fishing rod was simply a straight stick also notched at each end. Usually it was a little longer than the curved variety and was especially favoured for cod fishing, though no great distinction was made between the two kinds.

Both types of rod, with all their attachments, are shown in Figures 125 and 126.

Capt J. Bernard discovered an ancient rod of antler (Figure 127) in an old stone house on Bell Island, off the southwest coast of Victoria Island. It closely resembles Copper Eskimo specimens, though the house itself must date from the earlier Thule culture. I do not know the purpose of the holes drilled in each end.

The common line for these rods was a stout 3-ply cord, plaited from caribou leg sinew. It varied greatly in length, but generally ran from 35 to 60 feet. The upper end was fastened in different ways, sometimes with a few half hitches around the front of the rod, sometimes by a knot at the back end; the lower end was attached to the sinker, not to the hook, because the sinker and hook were riveted together.

For tomcod fishing in winter the western Copper Eskimo preferred a line of baleen to a sinew line, because the latter became encrusted with ice and was easily broken. These baleen lines, which could be quite short, were naturally commonest around Dolphin and Union Strait; natives farther east, who seldom or never saw a stranded whale, obtained them only by trade.

The sinkers were of bone, antler, or musk-ox horn, most often the first two. There were two types, one for use with a comparatively small hook when fishing in the lakes for trout and salmon, the other for use with a very much longer hook for catching cod.

The former type of sinker was usually from 1 to 2 inches long, oval in outline, flat on one face and rounded on the other. Most of them had two holes drilled through the upper end, one below the other. The end of the line then passed twice through both holes, forming a double-stranded noose, and was plaited back an inch or two from the sinker, where it was bound occasionally

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Figure 123. Snow sounder. IV.D.1684. 1/4.

Figure 124. Snow sounder with unusual handle of musk-ox horn. IV.D.110. 1/6.

with fine willow bark; many a careless fisherman, however, instead of splicing it, simply fastened it down by two or three half hitches. The same method of fastening the line was adopted when the sinker had only one hole.

The bottom of the sinker was nearly always grooved to fit the end of the hook; and often a small hole was drilled beside this groove to tie on the bait. The hook was originally of copper, but by 1914 most of the natives were using an iron hook beaten out in the same manner as the old copper one (Figure 128). Generally, it was flattened at the upper end and riveted, but occasionally it passed through a hole in the sinker and was pegged to its back (Figure 129). Iron hooks were often driven directly into the bottom of the sinker without riveting. There was never any barb, and the hook seemed extraordinarily large for the size of the fish; but it was never intended to be swallowed, as the fish was jagged in the mouth as soon as it nibbled at the bait.

The bait was usually a strip of skin and flesh from the belly of the fish, or sometimes its œsophagus. After being pushed onto the hook it was lashed to the sinker with a thread of sinew.

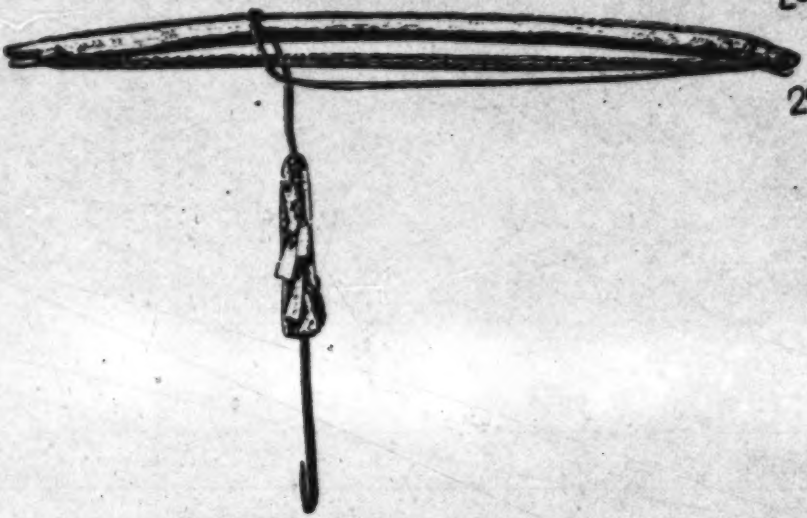

Figure 128. Wood fishing rod and line. IV.D.187. 1/4.

The sinker for cod was made from the same materials as the sinker used in lake fishing, but was generally much longer. The hook was also much longer, varying from 5 to 9 inches; but both it and the line were attached in the same manner. As no bait was used, there was no small hole at the bottom for its attachment; but three or four lures of bone or teeth, sometimes neatly shaped, were fastened at intervals to the under surface of the sinker by means of holes and sinew lashings (*See* Figure 125). Some common forms of these lures are shown in Figure 130. Often the natives dispensed with a hook altogether and used spears and a larger lure, made from a bear's tooth strung with smaller teeth or with gleaming fragments of bone that fluttered like fins in the water (Figure 131). Indeed, they caught more tomcod with their spears

[TEXT CONTINUED ON PAGE 110]

Indeed, they caught more tomcod with their spears during the winter months than with hooks. The Copper Eskimo never employed the artificial baits of stone or ivory, carved into the shape of fish, that were current among the Eskimo to the westward.

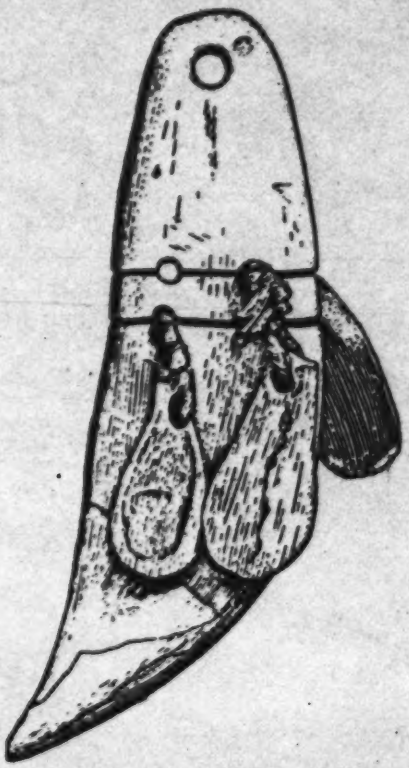

Figure 131. Lure of polar bear's tooth. IV.D.708. 2/3.

Gorges. Women, rarely men, caught a few trout and salmon with the gorge, which was merely a pointed bone wrapped inside the body of any small fish and attached by a line to the shore. Figure 132 is copied from a rough field sketch of a gorge used by a woman on Victoria Island. It was about 6 inches long, made from a splinter of caribou leg bone, and not distinguishable in any way from the needle used for stringing the salmon that were caught in weirs. I never saw a double-pointed gorge.

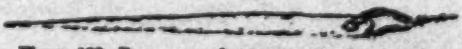

Figure 132. Bone gorge, for trout and salmon. 1/2.

Needles for Stringing Fish. Most needles used for stringing salmon at weirs were roughly shaped splinters of caribou leg bone (Figure 133), but in

one needle, 8 inches long, the splinter was mounted in a wooden handle. The line was of sealskin, generally closed at the far end with a stick of bone, antler, or wood to prevent the fish from slipping off.

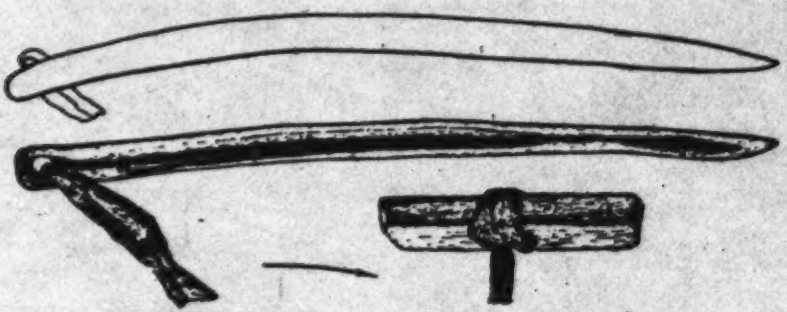

Figure 133. Bone needle for stringing fish. IV.D.461. Approx. 2/3.

Fish Bags. To pack their fish to camp the Eskimo used a bag of sealskin, commonly made by folding in the ends of a whole skin, doubling it over and tying a line to each end. The same bag, laced across, served as a dog-pack.

Fish Spears. Two varieties of fish spear were employed, the trident and the leister. The leister was preferred for spearing trout and salmon in lakes when they came to nibble at the lure, the trident for the migrating salmon that entered the weirs across streams; but generally a man used whichever weapon happened to be nearest at hand.

The shape of the leister is best seen from the illustration (Figure 134a). The handle was simply a long pole, split at the end to receive a barbed, occasionally barbless, point of antler, which was held in place with a lashing of sealskin, or more rarely of sinew. Two prongs facing each other, which sprang open on striking the fish, were invariably of copper or iron, copper, of course, being the original material; they were driven like nails into antler heads, which were bevelled off at the lower ends to fit corresponding ends on wooden extensions. Antler and wood were spliced with sealskin lashing, strengthened at times by bone or antler nails. The wooden extensions were then bevelled off in the same manner and lashed to the shaft, but not nailed, as low ridges at their tips prevented the lashings from slipping off. All these lashings quickly dried up from disuse, and the parts fell asunder except where they were held together by pegs. In a few leisters the side pieces were entirely of antler, not of antler and wood combined.

The trident (Figure 134b) resembled the leister, but had no prongs on the side pieces, which were made entirely of antler, pointed and barbed like the point in the middle. The number of barbs varied; in some cases they were directly opposite, in others staggered, both arrangements occurring at times on the same weapon.

Double-pointed spears were sometimes improvised for stabbing sculpins, or the small fish that hide under the stones on the margins of lakes. I have seen two sharpened pieces of bone, and even a European fork, lashed to the end of a walking-stick for this purpose. Naturally, they were dismantled again as soon as the need for them passed.

All sealers carried these bone skewers stuck in a strip of skin, but not all of them burdened themselves with a bag and a spare harpoon. Lacking the bag, they merely cut a hole in the strip of skin for slipping it over the coat button.

Toggle for Leading Dog. Figure 149 illustrates the usual toggle for leading a dog to the sealing ground. In principle it is the same as the toggle on the harness. The rigid parts are of bone, antler, or musk-ox horn; the cord and strap, of sealskin or caribou leg sinew. The broad loop hung over the sealer's wrist, and the small toggle buttoned into the loop at the end of the dog trace. There was no variation except in size, and no ornamentation.

Toggles for Hauling Seals. Toggles for hauling seals were indistinguishable from women's belt toggles (*See* page 50). Like most of the latter they were made of bone, antler, or musk-ox horn, nearly always the first, measured between 2½ and 4 inches from tip to tip, and had the shape of a crescent that tapered towards each end. Two ends of a short cord of sealskin, or more usually of plaited sinew, were passed through the hole and knotted to form a loop (Figure 150). The sealer threaded the toggle through a hole in the seal's mouth, passed it back through the loop and attached it to the trace of his dog, which then dragged the carcass home.

Sealing toggles, like other bone implements, were often ornamented with incised lines. These will be discussed in another place.

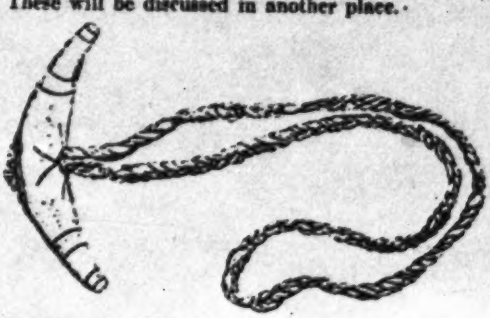

Figure 150. Toggle for hauling seals. IV.D.197. 1/2.

LAND HUNTING EQUIPMENT

Bows and Arrows

Most bows were made from three pieces of spruce wood, a middle piece and two "horns," joined together with the usual "cleft" or V splice (Figure 151*b*). Bows made from a single piece of wood were comparatively rare (Figure 151*a*), though one, owned by a 6-foot Tree River native, was stronger than any of the three-piece weapons. From the eastern end of Coronation Gulf came a few bows built up from musk-ox horn, caribou antler, or both materials combined (Figure 152), indicating a dearth of suitable wood in that region. In one of them, two pieces of musk-ox horn have been joined wth a cleft splice, but elsewhere in this bow, and in all other bows of horn or antler, the makers have used the less difficult scarfed splice, and strengthened it in places with copper or iron rivets. A few wooden bows have scarfed joints also, but they are mostly small weapons for women and children.

Because dry spruce has little tensility and easily fractures, every bow was strengthened with a score or more strands of braided sinew[1] that extended along the whole back and passed around the nocks (Figure 151). Some hunters

[1] One bow, a small one for a woman or child, has thongs of rawhide, presumably from want of sinew.

combined them into two or three cables, or wound a sinew or rawhide cord around them to keep them from slipping over the edge. Strips of muskin beneath them checked fraying, and lashings of sinew or of rawhide at the grip and joints held them firmly against the wood. Over each of the two weak places

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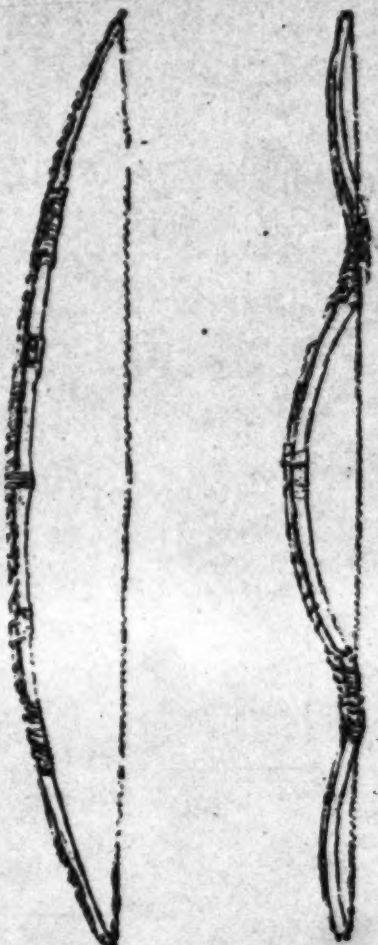

Figure 151. Two bows, one made from a single piece of wood, the other from three pieces. IV.D.72, 1278. 1/8.

Figure 152. Bow made from muskox horn and antler. Appears. IV.D.1980. 1/8.

411 284 [322]

in the bow, the joints, most hunters lashed a plate of wood, bone, or antler, and some added another plate on the under side (Figure 153). As many bows were of inferior wood that required strengthening in various places, the lashings and splices on one weapon seldom corresponded exactly with those on any other. The main strength of all of them, however, lay in the back lashings, which were

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secured to the wood by a complicated series of half hitches, well illustrated by Murdoch.[1] As these back lashings slackened with frequent tension and changing weather conditions, the owner wedged little plaques of wood, skin, or bone

[321]

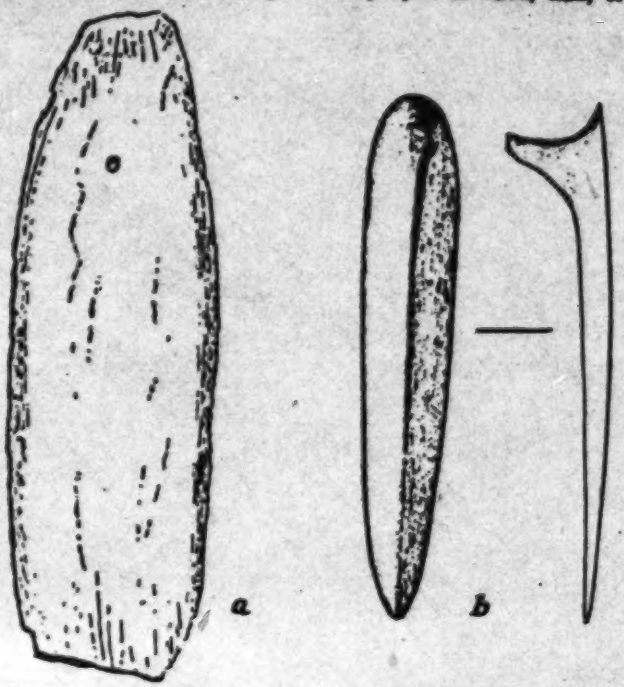

Figure 153. Braces to strengthen the joints of a bow. a: musk-ox horn; b: bone. IV.D.706, 602. 1/1.

beneath them (Figure 154), and when plaques no longer sufficed, he removed the lashings altogether and rewound them, an operation that he could perform in about an hour. Defects in the horns were more serious, but not insuperable. I [461] have seen a native strip a bow down to the bare wood, fit it with two new horns, and relash the weapon ready for use in the space of 4 hours.

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[283]
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[237]
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32
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Figure 154. Plaque of rawhide, wedged under the back lashings of the bow. IV.D.79. 1/1.

The bowstring was made from five or six strands of sinew, twisted together. When stringing his weapon, the hunter sat on the ground and pushed the middle of the bow from him with his foot while pulling the horn towards him.

When the party of Indians with whom Hearne travelled in 1771 massacred some Copper Eskimo at Bloody Fall, near the mouth of Coppermine River, Hearne noticed that most of the Eskimo arrow heads bore triangular points of a slate-like stone, whereas the remainder had points of copper.[2] The Copper Eskimo we encountered were using only points of antler, bone, copper, or iron.

[113]

[1] Murdoch, John: A Study of Eskimo Bows in the U.S. National Museum: Report of the U.S. Nat. Mus., 1894, pp. 6-16.
[2] Hearne: op. cit., p. 188.

411 scarfed and spliced together with three copper rivets (Figure 156). Both were
324 deeply encrusted with lichens, and were evidently of considerable antiquity.
321 Probably they were made by ancestors of the present-day Copper Eskimo. On
172 the other hand, it is not at all impossible that they are arrow heads of the earlier "Thule"-culture inhabitants who have left other remains in the region. The use of copper rivets does not rule out this possibility, because copper-bladed women's knives with typical "Thule" handles have been recovered from an old stone house on Victoria Island and from a stone grave on the neighbouring Read Island, along with harpoon heads and other objects of typical Thule (North Alaskan) types. There are good grounds for believing, therefore, that [325] [174] the ancient Thule population itself used the local deposits of copper and passed on its knowledge to the ancestors of the present-day Copper Eskimo when the latter migrated into the area.[1]

411 In 1914 arrows with long antler points that fitted directly into the wooden
321 shafts were fairly common; some had no barbs, others one or more along one
325 side. Much more common, however, were arrows with separate blades of bone, copper, or iron that riveted into antler foreshafts, or were provided with long shanks that took the place of foreshafts. Points of bone were rare; about 65 per cent were of copper and the remainder of iron, hammered into the same shapes as the copper ones. These shapes, and also the methods of splicing the wooden shafts when made of two or more pieces, have been rather fully illustrated by Stefansson.[2] Individuals may have preferred one type of point to another for certain game, but so far as I could discover they used all types more or less indiscriminately.

411 The Copper Eskimo used the Mediterranean release, holding the bow
237 almost horizontal. They generally feathered their arrows with goose, loon, eider duck, or snowy owl quills, but did not disdain quills from other birds. Normally, two feathers only were used on each arrow, but occasionally three, for no special reason that I could discover. The hunter cut off on his trimming board all the barbs along one side of the feather, smoothed the rough quill with his knife, grooved the arrow shaft with the special tool for that purpose (or, if he lacked this tool, split it slightly with his knife), and lashed the two ends of the feather in the grooves with caribou sinew. This was the usual way of feathering. Occasionally, however, he merely trimmed the barbs a little on both sides and fastened the feather flat against the shaft. There was also a third method, in which two half feathers, i.e., feathers from which the barbs on one side had been removed, were lashed around the end of the shaft spirally, end to end, and the barbs spread fanwise. I saw a man feather an arrow for his young stepson in this way and was told that it was a rare method, never employed on arrows intended for serious use.

Bow-case, Quiver, and Tool Bag

411 The bow-case (Figure 157), which was made of sealskin to keep out water,
415 was shaped to the form of the weapon; one end was closed, the other left open
281 for some distance down its curved edge to permit the insertion of the bow. To close the opening when the bow was in place there was a short cord of plaited sinew whose loose end was tucked under the lashing, leaving the tip protruding so that it could be unfastened at a single jerk. A quiver with or without a cap was sewn or buttoned to the straight edge of the case; and a tool bag was also sewn to the case in such a way that the quiver, when carried on the back, lay on top of it and prevented its contents from falling out. Often, too, there was a sheath

[TEXT CONTINUED ON PAGE 128]

[1] Mathiassen found a little copper in the old Thule site at Naujan, on the west coast of Hudson Bay (Reports of the Fifth Thule Expedition, vol. IV, pt. 1, pp. 14, 15 (Copenhagen, 1927)); and Graham Rowley discovered a small copper hook in a Dorset culture site near Ivujivik, some 200 miles further north. So far as we know today, this copper could have come only from the Coronation Gulf region.

[2] Stefansson, V.: Arch. Papers, Am. Mus. Nat. Hist., vol. XIV, pp. 23-29 (1919). [113]

small birds, principally ptarmigan; hence these toggles were called *aqargiqsiuliit:* "ptarmigan appliances" (Figure 161).

A bone or musk-ox horn handle (*neruminaq*), fitted with a short strap of plaited sinew (Figure 162), was sometimes kept in the tool bag, but more often looped through some hole on the outside of the quiver or bow-case, or attached in some other way. Usually about 10 cm. long, of standardised shape, it was often grooved to fit the fingers in the same way as the blubber pounder and the whittling knife. This handle served on occasion to carry any small bundle, but was principally used for carrying the head of the caribou, or the bag containing its blood. From the latter use it acquired a second name, *auqtun* or "blood carrier".

Figure 160. Toggles sewn to bow-case. *a* for attaching the carrying strap, *b* for attaching the quiver. IV.D.1053, 91. 1/1.

The tool bag was often closed by lacing, for which purpose one end of a short cord of sinew was attached to the edge of the bag, and the other end to a small bone needle with which it could be threaded through the holes. When completely furnished, it contained the following articles.

Two marline-spikes for the bow lashings; two twisters for the bow lashings; one or more spare wedges to go under the lashings; feathers for the arrows, kept usually in a small bag of marmot or other skin; a small board for trimming the feathers; a grooving tool for attaching the feathers; a little caribou back sinew for lashing the feathers, splicing the arrows, sewing rents in clothing, etc.; spare parts of arrows for repairs; bone skewers for the carcasses of game; bone pins for the bag that contained the caribou blood; a wrist guard; a drinking tube; a needle-case and needle; a mattock for making a hunting pit (if too large for the tool bag this was carried in the quiver or even in the bow-case); an arrow straightener.

Very few tool bags, however, contained all these articles. The natives nearly always hunted together, and the deficiencies of one bag could be supplied from another. On the other hand, the tool bag often contained other articles, such as the whittling knife and the graver for cutting bone, which were more usually stored in a special tool bag at home, with the adze and the bow-drill. The bow adjuster, being large and cumbersome, was also left in camp.

Marline-spikes. Marline-spikes (Figure 163), which averaged from 6 inches to 10 inches long, were made of caribou or musk-ox bone. Some closely resembled marrow spatulæ and, at times, were actually used for extracting marrow, but their larger size, heavier construction, and the small hole below the handle instead of at the extreme end distinguished them from the ordinary spatulæ. This hole enabled them to be lashed in pairs, because two were required to unfasten and tighten the back lashings of the bow. One cord often fastened together the two marline-spikes and the two twisters, which also went in pairs. The handles of marline-spikes were frequently grooved for the fingers on one edge, and sometimes on both. Ornamentation, however, was rare, and when it did occur, consisted merely of a few incised lines or the ring-and-dot pattern.

Figure 161. Bone toggle attached to either bow-case or quiver for pinning through ptarmigan wings. IV.D.1029. 1/1.

Twisters. The twisters (Figure 164) were much shorter than the marline-spikes to which they were usually attached, although they were made of the same material, and also used in pairs. All had the same unvarying shape, a flattened

[TEXT CONTINUED ON PAGE 131]

stick 4 inches or so in length turned up at the ends in contrary directions, and with a small hole in the middle to lash them together. No ornamentation was observed on any of these implements.

Wedges. Figure 164 shows a typical wedge, a flat square of wood, bone, or rawhide for inserting under the back lashings of the bow. Some had holes through the middle so that they could be tied to the bow-case.

Figure 165. Wooden board for trimming arrow feathers. IV. D.163. 2/3.

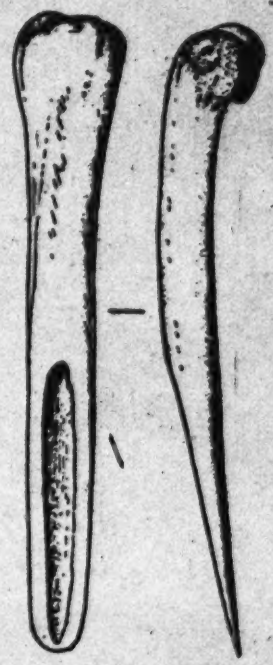

Figure 166. Bone instrument for feathering arrows. IV.D.1622. 1/1.

Board for Trimming Feathers (Figure 165). Any flat piece of wood served for trimming the feathers. The board in the tool bag was usually from 4 inches to 5 inches long and from 1 inch to 2 inches wide.

Grooving Tool. The grooving tool for attaching the feathers to the end of the arrow shaft was generally the hollow wing bone of a large bird bevelled off at one end like a chisel (Figure 166). Hunters who lacked a proper grooving tool sometimes used the marline-spike.

Spare Parts of Arrows. These consisted of broken shafts and heads that could be used in mending; scraps of bone or antler, and pieces of copper, to be worked up later into arrow heads.

Bone Skewers. The Copper Eskimo hunter had two sets of bone skewers, one for pinning up the carcass of the caribou, the other for closing the harpoon wounds in seals. It was only the former, which were usually a trifle longer and of slightly different shape, that he carried in the tool bag on his bow-case. Most of them were fashioned from caribou leg bone, and resembled rounded pencils

412 about 6 inches long that tapered to rather blunt points, and had rounded or
414 conical knobs at their heads so that they could be fastened together in pairs,
32 either tied with sinew or, more often, pushed through holes in a small strip of
sealskin. If knobs were lacking, small holes were drilled for tying them together
(Figure 167).

412 *Bone Pins* (for the blood bag). The hunter generally collected the blood
414 of the caribou in the reticulum of the stomach, which is shaped like a pouch.
32 To close this pouch he carried in his tool bag two or three thin round pins of
224 bone, rarely of wood, that ranged in length from 2½ inches to nearly a foot. The
[415] points were usually rather sharp so that they would penetrate the reticulum
without tearing a large hole; and the heads were shaped in various ways, so that
many blood pins were indistinguishable from the needles used to lace together
the front of a tent (Figure 168). Some were quite plain, others had small knobs
or were bevelled off like a marrow spatula; but a favourite form had two or
even three projecting points, which were useful for keeping the mouth of the
bag open when pouring the blood into it. Many hunters fastened their pins in
pairs, like the meat skewers, the twisters, and the marline-spikes. A man who
had no pins, tied inside the mouth of the blood bag a wooden plug such as is
shown in Figure 169.

Figure 167. Bone skewers for pinning up a caribou carcass. IV.D.688, 12"". 1/2.

411 *Wrist Guard.* Archer's wrist guards (Figure 170) seemed to be universally
[531] of bone, and never to vary from an oval outline. The fine carving and engraving
that appears on wrist guards east and west of this area was unknown to the
[91] Copper Eskimo, where one specimen was typical of all.

Drinking Tube. The drinking tube, though normally carried by the hunter
415 only, was used by his entire family when travelling overland in summer with
237 all its possessions. It was simply the hollow leg bone of some bird, usually a
swan, not ornamented or marked by any special features. Many were indis-
tinguishable from the needle-cases often found in the same tool bag (Figure 171).

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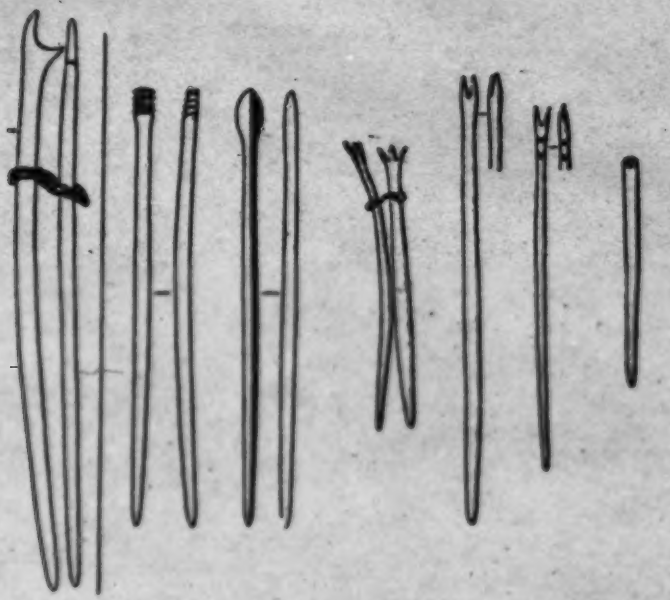

Figure 168. Bone pins for fastening the blood bag. IV.D.1848, [illegible], 1917, [illegible]. 1/2.

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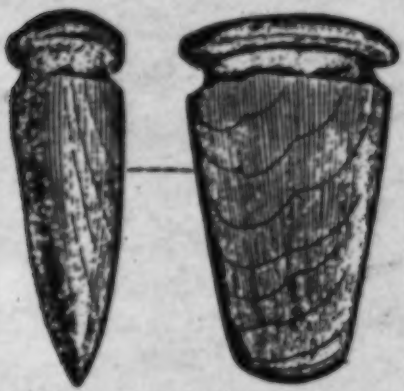

Figure 169. Wooden plug for closing the blood bag in the absence of a skewer. IV.D.1851. 5/4.

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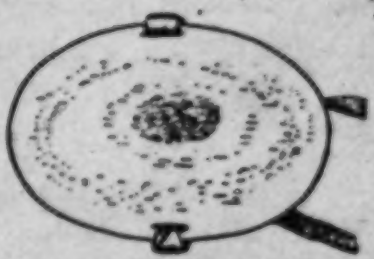

Figure 170. Archer's bone wrist guard. IV.D.[illegible]. 1/1.

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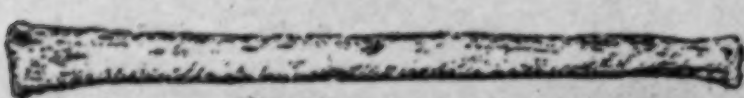


Figure 171. Bone drinking tube. IV.D.[illegible]. 1/1.

its owner streamed water over the mud to produce the thin coating of ice that reduced friction to a minimum.[1] By the end of April, however, it required protection from the growing warmth; the Eskimo, therefore, draped the sunward sides of their sleds with skins when in motion, and piled snow over the runners when at rest. In May even this protection failed them; gradually the mud melted and fell away. 493 823

The tops and bottoms of the runners were roughly parallel except in front, where the bottoms curved upward like a ski. Spaced about a foot apart were the flat crossbars, each lashed down at the ends with a rawhide thong that passed two or three times over the bar and a corresponding number of times through a hole in the runner below. To the front crossbar was attached also the toggle that bore the strain of the traces, a "new-moon-shaped" object of musk-ox horn, slotted in the middle and suspended between the runners by means of a belt of stout rawhide, preferably from the skin of the bearded seal (Figure 177); each end of the belt passed from the inside through a special hole in the runner below the front crossbar and then "button-holed" over the projecting end of that bar. There seemed to be no variation in the shape of this sled toggle, nor did I see any that were not made of musk-ox horn, which indicates that the animals were comparatively numerous a few years ago within the territory of the Copper Eskimo. 493 321 [284] [136]

Figure 177. Sled toggle, of musk-ox horn. IV.D.191. Approx. 1/4.

In the late spring and early summer, when a sled was difficult to drag over the numerous patches of bare ground, the Copper Eskimo commonly substituted the skin of a seal or polar bear, which glided with much less friction over soil and stones. In the autumn, again, before recovering the sleds they had abandoned late in the spring, they sometimes fashioned runners from skins, which they held in shape with fillings of willow branches and ice, and equipped with crossbars in the usual manner. On one occasion a native even used a block of ice for a sled; he merely rounded the bottom a little and grooved the front end for the attachment of his trace. 493 237 [823]

Two Eskimo who travelled from Backs River to our station in the winter of 1915-16 dragged sleds that were longer, narrower, and with lower runners than any I saw among the Copper Eskimo, but in all other respects seemed identical. One of them had a square sail of dehaired caribou hide mounted near the front to take advantage of the favourable wind; this, of course, was not an aboriginal invention, but reflected the influence of Europeans. [171] [177]

Sleds rarely carried any ornamentation. We observed only two instances, both of which consisted of a simple Y pattern painted in red and black on the sides of the runners where they began to turn upward. 493 531

Harness. Like other Eskimo previous to European contact, the natives around Coronation Gulf hitched their dogs to the sled fanwise, with individual 492

[1] See Reports of the Can. Arct. Exped., vol. XII, pp. 195, 198. The Copper Eskimo never mixed blood with the water, or used blood alone, as was commonly done by their neighbours farther to the east. [171]

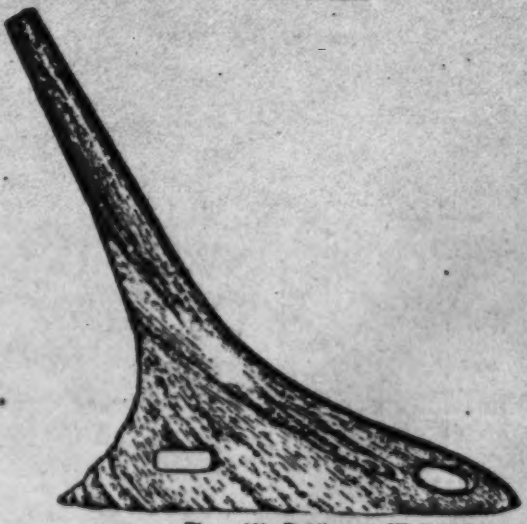
501 in most districts he used it so seldom that he either disposed of it after a year or two, or else broke up its frame and employed its wood and skin for other [422] purposes. At the time of our visit not one man in ten owned a kayak, or even the frame of one. Around Dolphin and Union Strait I saw only two kayaks, one of them owned by a Victoria Island native, but they became progressively more numerous as one travelled east to Bathurst Inlet. They kept the same shape everywhere, although they differed in length; and the frame was invariably 501 of spruce wood, the covering of sealskin. Generally they were longer, and, in 171 proportion to their length, narrower than kayaks to the westward. They lacked, also, attachments for a sealing harpoon or bird spear, and their bows and sterns had neither eyelets nor projecting horns to facilitate their transport on sleds. In Mackenzie Delta nearly every kayak bore an upstanding horn at each end, and along the Arctic coast of Alaska as far as Barrow, if not beyond, it was usual to have an eyelet in the bow and a horizontally projecting horn in the stern. Below are the measurements of five kayaks, two from Arctic Alaska, two from Mackenzie Delta, and one from Victoria Island within the territory of the Copper Eskimo.

—	Arctic Alaska		Mackenzie Delta		Victoria Island
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
Total length	15	13 3	15 8	15 10	21 7
Greatest breadth	1 6	1 6	1 7½	1 6	1 3½
Distance of opening from stern	6 5	5 8	7	7	8 6
Depth of opening in front	1	1	11	1 2	1 2½
Depth of opening behind	9½	9	6½	8	7
Diameter of opening	1 4 by	1 11 by	1 4½ by	1 6 by	1 6
	1 6½	1 3½	1 6	1 6	

501 In Copper Eskimo kayaks, bows and sterns were practically straight and the deck level, except just forward of the opening for the paddler, where the front of the gunwale, as usual, was raised by an angular arch. This gunwale was formed by two circular hoops of wood that bound the skin covering between them and were tightly lashed together with sealskin thongs through holes near their rims. Lashed to the deck a few inches in front of the hole was the paddle [321] rest (Figure 181), an L-shaped piece of bone with the upstanding "horn" tilted slightly backward; by resting the middle of his double-bladed paddle against this horn, the hunter obtained greater leverage. I saw no other attachment to a kayak, and was told that the hunter who carried a lance merely pushed its [126] butt under the lashings of the paddle rest. From Capt. J. Bernard, however, I [237] obtained the curious baleen object illustrated in Figure 182, which he stated had been used in some way on a Coronation Gulf kayak. Possibly it supported the skin deck, its two triangles fitting on the gunwales; or it may have been fastened on the deck and lances thrust through the triangles.

501 Figure 180 shows the wooden paddle of the kayak illustrated in the same 321 drawing. It is 11 feet long, ridged at each grip, and edged with bone on the two 322 blades. The bone is grooved to fit over the wood and secured with antler rivets that in three places have fallen out and have been replaced by iron nails. Over each of the two ridges is a sealskin ring three-quarters of an inch in diameter, made by coiling a thong of sealskin around a base of the same material; it kept the water from dripping down the blade onto the paddler's hand. Having seen 501 in the Coronation Gulf area only two other paddles, which I did not examine

closely, I cannot say whether or not this specimen is typical. One thing is certain, however, the Copper Eskimo never used the single-bladed paddle that is now so common in the western Arctic. 501



[321]

Figure 181. Paddle rest. IV.D.1645. 1/1.

As the kayak was useless in winter, the Copper Eskimo hunter commonly stripped off its skin covering and cached the frame in some convenient place, weighting it down with a few stones. One man cached his frame near the headquarters of our expedition, where I might have studied its construction in detail; unfortunately, I let the opportunity pass. If a hunter desired to cache his kayak during the summer months, when its skin cover might be torn to shreds by dogs and foxes, he sometimes raised it on stone pillars. Two such pillars on Victoria Island, built of flat slabs of dolomite, stood about 5 feet high and about 6 feet apart.

[124] [237]

Figure 182. Kayak appliance, of baleen. IV.D.1647. 1/2.

PASTIMES

The pastimes of the Copper Eskimo have been described in Report of the Canadian Arctic Expedition, vol. XII, ch. XVII. Only two or three of them required specially made apparatus. 524

Cup and Ball. For the "cup and ball", or "ring and pin" game, as it is variously called, the Copper Eskimo invariably used the humerus of the bearded seal. They drilled one hole through the centre of the smaller end, but in the larger end as many as possible, even continuing them at times down one or both faces. Figure 183 shows a typical specimen. 524 321

28: Jenness ND8 Copper Eskimo ND8
237
281

/For additional information pertaining to use of skins in clothing manufacture, see also categories 291 and 294./

29: Jenness E-5 (1914-1916) 1959
ND8 Copper Eskimo ND8

484
271 of three hours. At times I myself almost rivalled his feat without either quenching my thirst or feeling that it was in any way abnormal.

221 Early in May we camped four miles from the south
361 coast of Victoria Island, where the hunters could con-
225 tinue sealing, if they wished, or intercept the caribou as
224 they grazed on the beach before proceeding inland. Sealing was the more profitable occupation, since the caribou were lean from long travelling and their meat
[237] satisfied the hunger of neither men nor dogs. Even their hides were useless, for the larvæ of warble-flies had profusely perforated them, and the long white fur of winter was beginning to shed and give place to
[261] a shorter coat of brown. But my companions, who had lived on seal meat alone for four months, craved variety, and the sight of caribou increased the desire.
[177] We divided our party; those who had only bows and arrows continued to watch over the seal-holes, and the three who possessed rifles hunted caribou, Ikpuck with a .44 Winchester, The Runner with a .22 Remington, and myself with a Ross Sporting .280.

224 Our first caribou hunt gave me some useful training for the days to follow. A man who had risen earlier than the rest sighted five caribou passing our camp a mile to the eastward, and awakened Ikpuck and me. We dressed hastily, and, without waiting for breakfast, raced at top speed for the shore to cut them off as soon as they landed. Breathless with the exertion,

29: Jenness E-5 (1914-1916) 1959
ND8 Copper Eskimo ND8

they were always well pleased when I joined the hunting excursions.

Yet my "parents" were not satisfied. They wished me to become expert in fishing also. The caribou migration was almost ended; soon the herds would scatter far and wide, and fish alone be our mainstay until midsummer. Icehouse made a bag of sealskin to hold all the trout and salmon I would surely catch, and Ikpuck overhauled my fishing-line, fitting it with a barbless hook and bone sinker like his own. Then he wound it over a short stick notched at both ends, gathered up his own equipment, and invited me to my first lesson.

I have a vivid recollection of that lesson. We went out on the lake before noon, and with a chisel of native copper lashed to the end of a stout pole Ikpuck proceeded to dig a hole through the six-foot covering of ice. In twenty minutes he reached the water, making a hole fifteen inches in diameter at the top, four inches at the bottom. He then lowered his line until it touched bottom, rewound it about a foot, and began a rhythmical jigging.

"Take my chisel and make another hole for yourself," he said. Nothing seemed easier. I moved about twenty paces away and dug steadily for half an hour, but always there was more ice at the bottom of the hole. Ikpuck, who already had two trout on the ice beside him, looked over and laughed. "Come and

29: Jenness E-5 (1914-1916) 1959
ND8 Copper Eskimo ND8

CHAPTER IX

ON THE TRAIL OF THE CARIBOU

136 THE caribou or reindeer, for the two are identical, is the camel of the Arctic, the animal that transforms a barren waste into a hospitable dwelling-place for man. Domesticated, it transports his possessions and supplies him with milk; and tame
237 or wild, it furnishes most of his needs. My Eskimos had no knowledge of its domestication, but they made clothing and tents from its fur, straps and lines from the tanned hide, tools and weapons from the bones and antlers, ornaments from the teeth and toes, and thread and cord from the sinew of its back and legs. Every part of the animal thus had its use; but much was often wasted, especially at the end of summer, when the natives had wandered far from their sleds and

29: Jenness E-5 (1914-1916) 1959
ND8 Copper Eskimo ND8

winter sealing-grounds. They needed its fur for clothing, seven whole skins making only a single costume that lasted at the most three years; so they slaughtered bulls, cows, and calves, took the hides, the sinew, the back fat, and what little meat they could carry, and abandoned the rest to the wolves and foxes. Such indiscriminate destruction might have been branded as foolish, even criminal; but when white men have unconsciously exterminated the buffalo by similar methods, how can we expect a primitive people like the Eskimos to make regulations for the preservation of their game? After all, no regulations were necessary as long as their only weapons were bows and arrows, which exacted too light a toll to cause any diminution in the herds of caribou that returned to their Arctic grazing-grounds year after year. Only if conditions changed, if the natives became armed with the deadly magazine rifles of our modern civilization, would there be any reason for limiting the number a hunter might kill, or prohibiting the slaughter of females and young.

As we wandered southward, every eye in the party was strained for the sight of caribou. We secured our first trophy where the hills merged gently into the plain, and gave our dogs the feast for which they had hungered many weeks. From here on, patches of dwarf willow and heather, the fuel we had lacked so sorely in the hills, alternated with meadows of lichens and moss, or with wide stretches of stony ground

Almost devoid of vegetation.

29: Jenness E-5 (1914-1916) 1959
ND8 Copper Eskimo ND8

a hunting-knife lashed to the end of a tent-pole. That had been a terrific battle, infinitely more thrilling than our recent chase, for what chance had the two bears against a .44 Winchester? But a bear is a bear, however it is slain, and the joy of my companions was not lessened because the danger had been slight. The species remained as formidable as ever, and its representatives, even when dead, should be treated with caution and respect. So the prudent Ikpuck placed a needle-case beside the mother, and a miniature bow and arrow beside the cub, that they might not travel empty-handed to the spirit-home of their kind.

We camped beside the carcass of the larger bear for three days, enjoying the change from venison to a heavier meat. The dogs, more starved than feasted during the last six months, gorged themselves until they could hardly move. We had meat enough to last a fortnight, yet the hunters wantonly shot three caribou, bringing in only the hides, the back fat, and the sinew. When I remonstrated against such wastefulness they merely said that caribou would always be plentiful, and that they wanted more hides to trade with their neighbours. There was one way in which I could check the slaughter, by threatening to supply no ammunition during the winter to any one who wasted the meat. The threat accomplished more than I had anticipated. They not only brought in one of the carcasses, but presented me with all the marrow-

29: Jenness E-5 (1914-1916) 1959
ND8 Copper Eskimo ND8

ing to the coast, where they had stores of blubber to feed their lamps and give light and warmth to their houses. At this moment they were preparing their sleds for the journey, restoring the shoeing of frozen mud that had dropped off during the spring. They dug out the turf from a meadow with mattocks of curving antler, thawed and crushed it inside the houses to weed out the roots, kneaded it into "cricket-balls" with water, and plastered it along the bottoms of the upturned runners. There, while it was still soft, they moulded it into shape with their hands and scraped it smooth with long-handled knives. The mud froze to the hardness of stone, giving an admirable shoeing that would last throughout the winter; but its gritty surface required a thin coat of ice to make it frictionless against the snow, and the coat had to be renewed before each day's journey. When we were travelling down to the coast over the comparatively thin ice of a lake or river, my companions sometimes poured a few buckets of water over the surface and ran their sleds through the pool before it froze; but the usual, and, in the heart of winter, the invariable method, was to fill the mouth with water and squirt a stream over each runner, rubbing it down quickly with a mitten of polar-bear fur. The Eskimos preferred polar-bear fur because a special oil in its hair prevents the adhesion of water; for the same reason our zoologist-commander, always quick to recognize the value of Arctic